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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/693,508	10/24/2003	Mike Blossfeld	TRW9BCS)6768	2236

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TAROLLI, SUNDHEIM, COVELL, & TUMMINO L.L.P.
1111 LEADER BLDG.
526 SUPERIOR AVENUE
CLEVELAND, OH 44114-1400

EXAMINER

FRIEDHOFFER, MICHAEL A

ART UNIT PAPER NUMBER

2832

DATE MAILED: 09/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/693,508

Applicant(s)

BLOSSFELD, MIKE

Examiner

Michael A. Friedhofer

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2832

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 0902.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. Claims 4 and 5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 4 and 5, there is confusion between plural and single compliant connectors and the number of through holes actually present.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blossfeld in view of Coppola and Tanishi et al.

Blossfeld discloses in figures 1-8 a rocker switch for operating a vehicle window motor including a printed circuit board 30; first through sixth contacts forming switches 14 and 16; rocking contacts 70 forming first arm 80 and second arm 90; actuator 20 pivotable to effectuate rocking movement of the rocking contacts, and terminals connected to the contacts and extend through the base 12 for mounting to circuit board 30. Two of the contacts are in continual contact and support the rocking contacts for pivotal motion. The rocking contacts pivot in opposite directions to connect to the contacts located on either side.

Blossfeld does not disclose the terminals as being compliant pin connectors.

Tanishi et al teaches in figures 1-14 a switch in which the compliant terminals 14 and 16 extend through the base 2 into printed circuit board 30 and deflect against plated sidewalls of the circuit board for mounting the switch to the circuit board. The compliant connectors provide a solderless and adhesive-free connection between the apparatus and the circuit board.

Coppola teaches in figures 1-7 a switch including compliant connectors 60a and 60b for mounting the switch to the circuit board 12. The compliant connectors include spaced deflectable beam portions having outer surfaces spaced apart a distance greater than the spacing of the opposing surfaces of the side walls of the through holes in the circuit board with inner surfaces curved and facing toward each other and outer surfaces facing array from each other.

It would have been obvious to one of ordinary skill in the art to apply the teachings of Coppola and Tanishi et al to form the terminals as compliant connectors with spaced deflectable beam portions facing outwardly because this is for the purpose easily mounting the switch to the circuit board while reducing the number of elements needed in mounting the switch and by reducing the number of manufacturing steps.

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Czarnecki and Czarnecki et al teach rocker switches for

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operating motor vehicle windows. Loose and Liao teach compliant connectors for mounting to a circuit board.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael A. Friedhofer whose telephone number is 571-272-1992. The examiner can normally be reached on Mon-Fri 6:00 - 2:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin Enad can be reached on 571-272-1990. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Michael A. Friedhofer
Primary Examiner
Art Unit 2832

maf